

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

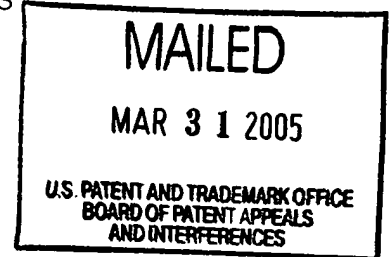
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Ex parte C. BERTIL STROMBERG

Appeal No. 2005-0698  
Application No. 09/722,420

ON BRIEF



Before WARREN, KRATZ and DELMENDO, Administrative Patent Judges.  
KRATZ, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's refusal to allow claims 1-16, 23 and 24, which are all of the claims pending in this application.

BACKGROUND

Appellant's invention relates to a method of bleaching cellulosic fibrous material. Ozone gas is used in a bleaching stage prior to a liquid chlorine dioxide bleaching stage. Between those stages the fibrous material is treated with an alkaline liquid without employing any washing between those two bleaching stages. A further understanding of the invention can

be derived from a reading of exemplary claims 1 and 23, which are reproduced below.

1. A method of treating a slurry of comminuted cellulosic fibrous material to produce a bleached chemical pulp, comprising:

(a) treating the material in a first stage with a gas containing ozone;

(b) treating the material in a second stage with a liquid containing chlorine dioxide;

(c) between (a) and (b) treating the material with an alkaline liquid to raise the pH of the material prior to (b) and so that no washing is performed between (a) and (b).

23. A method of ECF treatment of comminuted cellulosic fibrous material comprising the sequence soda/AQ cooking, and then one of D-E<sub>p</sub>-(ZEND), or D-E<sub>o</sub>-(ZEND), or D-E<sub>op</sub>-(ZEND).

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Tsai	4,959,124	Sep. 25, 1990
Ambady et al. (Ambady)	5,645,687	Jul. 09, 1997

Mannbro	81020828 (Sweden)	December, 1982 <sup>1</sup>
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Nimmerfroh et al. (Nimmerfroh), "Überlegungen zum grobtechnischen Einsatz von Ozon zur Zellstoffbleiche," Wochenblatt Fur Papierfabrikation, translated portion of pp. 860-868, 21-1992 as in the 11 page Translation dated February 11, 1993 that is of record.<sup>2</sup>

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<sup>1</sup> Appellant does not dispute the examiner's determination (answer, page 3) of the publication date of this reference.

<sup>2</sup> Our references to Nimmerfroh are to the English language translation of record. In this regard, we note that not

Claims 1 and 3 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Tsai. Claims 1-3, 7, 8, 13 and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsai in view of Ambady. Claims 4-6, 9-12, 15 and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsai in view of Ambady and further in view of alleged admitted prior art set forth at page 2, lines 19-25 of appellant's specification. Claims 23 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsai in view of Ambady, alleged admitted prior art set forth at page 2, lines 19-25 of appellant's specification, and Mannbro or Nimmerfroh.

We refer to the brief and reply brief and to the answer for a complete exposition of the opposing viewpoints expressed by the appellant and the examiner concerning the issues before us on this appeal.

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withstanding the pages of the original document listed in the answer, the only portion of Nimmerfroh that we consider as being part of the stated rejection is the portion reflected in the "Translation" dated February 11, 1993 that is of record. This is so because a translation of all of the untranslated pages of Nimmerfroh listed in the answer has not been made of record by the examiner and only the Translation is referred to by the examiner in the rejection of claims 23 and 24 in the answer. Thus, the untranslated portions of Nimmerfroh are not before us.

OPINION

Having carefully considered each of appellant's arguments set forth in the brief and reply brief, appellant has not persuaded us of reversible error in the examiner's obviousness rejections. Accordingly, we affirm the examiner's § 103(a) rejections. However, we reverse the examiner's § 102(b) rejection. Our reasoning follows.

§ 102(b) Rejection

Under 35 U.S.C. § 102(b), anticipation requires that the prior art reference disclose, either expressly or under the principles of inherency, every limitation of the so rejected claims. See In re King, 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986).

Rejected claims 1 and 3 require the absence of washing between an ozone bleaching stage and a subsequent chlorine dioxide bleaching stage. The examiner relies on Examples 8, 9 and 11 of Tsai as representing anticipating disclosures. In this regard, the examiner refers to column 5, lines 45-47 of Tsai in asserting the proposition that the parenthesis used in describing Examples 8, 9 and 11 of Tsai reflect the absence of washing between the bleaching stages.

On the other hand, appellant maintains that the language "Examples 8 and 9 (DZED)" and "Example 11 (DZEDED)" as employed in column 6 of Tsai under the heading "EXAMPLES 6-13" does not describe the absence of intermediate washing between an ozone stage (Z) and a subsequent chlorine dioxide stage (D) as evidenced by the description of the bleaching sequences for Examples 8, 9 and 11 as shown in Table 2 of Tsai.

We agree with appellant's viewpoint that the examiner has not established a prima facie case of anticipation, on this record. This is so because it is manifest that the parenthesis used at column 6, lines 33-51 of Tsai in describing Examples 8, 9 and 11 were used as a means to separate the coded bleaching sequence of a subject example number from the example number to which it pertained, not as a method of describing a bleaching sequence that had no intermediate washing steps, as referred to at column 5, lines 44-47. For instance, Tsai employs parenthesis to separate the subject language "Examples 8 and 9" from the bleaching sequence "DZED" used in those examples at lines 41 and 44 of column 6 of the patent. Thus, the description language "Examples 8 and 9 (DZED)" merely indicates that the subject examples 8 and 9 employ a DZED sequence as evident by looking to Table 2 where the "DZED" sequence is listed. Also, see column 6,

line 49 and column 9, lines 45-48, wherein it is made clear that the sequence of Example 9 is "DZED" without parenthesis being used to denote the absence of intermediate washing.

Thus, on this record, the examiner has not discharged the burden of proving that Tsai describes a process with the bleaching sequence required by appellant's claims 1 and 3. Accordingly, we reverse the stated anticipation rejection.

#### § 103(a) Rejections

Our disposition of the examiner's obviousness rejections is another matter. While picking and choosing may have no place in making a § 102 rejection for anticipation, such can be entirely proper in making an obviousness rejection under § 103. See In re Arkley, 455 F.2d 586, 587-88, 172 USPQ 524, 526 (CCPA 1972).

Starting with the examiner's § 103(a) rejection of claims 1-3, 7, 8, 13 and 14 over Tsai in view of Ambady, we note that appellant groups the so rejected claims together and does not separately argue the claims individually. Thus, we select claim 1 as a representative claim. See 37 CFR § 1.192(c)(7) and (c)(8) (2002)<sup>3</sup> and In re McDaniel, 293 F.3d 1379, 1383, 63 USPQ2d 1462, 1465 (Fed. Cir. 2002) ("if the brief fails to meet either

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<sup>3</sup> Also, see 37 CFR § 41.37(c)(1)(vii) (effective September 13, 2004: 69 Fed. Reg. 49960 (August 12, 2004); 1286 Off. Gaz, Pat. Office 21 (September 7, 2004))

requirement, the Board is free to select a single claim from each group of claims subject to a common ground of rejection as representative of all claims in that group and to decide the appeal of that rejection based solely on the selected representative claim").

Appellant does not contest the correspondence of the claimed process with Tsai in so far as Tsai discloses or suggests a pulp (comminuted cellulosic fibrous material slurry) treating process with a gaseous ozone treating stage, alkaline extraction stage and a following liquid chlorine dioxide treating stage corresponding to those set forth in representative claim 1.<sup>4</sup> Rather, appellant essentially argues that the subject rejection is in error because Tsai with or without Ambady does not teach or suggest pulp washing being excluded as a step intervening the ozonation stage and the following chlorine dioxide stage as required by representative claim 1.

We are not persuaded by that contention of appellant. Tsai (column 2, lines 60-62) teaches a preference for "conventional water washing of the pulp between the stages of the bleaching sequence", not a requirement for such washing steps. After all,

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<sup>4</sup> See column 4, line 10 through column 5, line 47 of Tsai for a description of the letter acronyms employed in Tsai and, by reference, in this decision.

Tsai merely prefers the option of selecting interstage water washing steps, as desired. See, e.g., column 4, lines 46-48 of Tsai. The disclosure by Tsai of a preferred embodiment does not teach away from the entire disclosure of the patent, all of which must be considered in the analysis of obviousness. See In re Burckel, 592 F.2d 1175, 1179, 201 USPQ 67, 70 (CCPA 1979).

It follows that one of ordinary skill in the art would have found in Tsai a suggestion to forego such conventional interstage water washing steps with their associated costs and complications as another option and employ a non-preferred optional bleaching sequence without such washing steps, including the disclosed DZED sequence without washing, that is, a (DZED) sequence. We note that motivation can be based on both economic as well as simplicity factors, and need not be expressly mentioned by the prior art. See In re Thompson, 545 F.2d 1290, 1294, 192 USPQ 275, 277 (CCPA 1976); In re Clinton, 527 F.2d 1226, 1229, 188 USPQ 365, 367 (CCPA 1976).

Furthermore, it is not necessary for a finding of obviousness that the prior art reference provides all of the specific reasons for the combination of the teachings thereof as disclosed by appellant. See In re Kemps, 97 F.3d 1427, 1430, 40 USPQ2d 1309, 1311 (Fed. Cir. 1996); In re Beattie, 974 F.2d 1309,



1312, 24 USPQ2d 1040, 1042 (Fed. Cir. 1992). It is well settled that a prior art reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art. Merck & Co., Inc. v. Biocraft Laboratories, Inc., 874 F.2d 804, 807, 10 USPQ2d 1843, 1847 (Fed. Cir. 1989).

Because we find that the teachings of Tsai are sufficient to render the subject matter of representative claim 1 prima facie obvious, we need not address the further teachings of Ambady.

Having reconsidered the evidence of record for and against a conclusion of obviousness in light of the respective arguments advanced by appellant and the examiner, it is our determination that, on balance, the evidence weighs most heavily in favor of an obviousness conclusion with respect to the rejection under consideration.

It follows that we will affirm the examiner's first stated § 103(a) rejection.

Concerning the examiner's separate § 103(a) rejection of claims 4-6, 9-12, 15 and 16 as being unpatentable over Tsai in view of Ambady and further in view of alleged admitted prior art set forth at page 2, lines 19-25 of appellant's specification, we note that appellant argues the claims as a group. Accordingly, we select claim 4 as the representative claim on which we base

our decision for this rejection.

Appellant does not argue that the additional limitation of representative claim 4 further patentably differentiates the claimed subject matter from the combined teachings of the applied references or that soda/anthraquinone (AQ) is an unobvious pulping process. Rather, appellant argues that the "admitted [prior] art" does not teach the claimed bleaching sequence without washing between the stages. However, the "admitted [prior] art" is not relied on by the examiner for establishing the obviousness of the claimed bleaching sequence without intervening water washing. Rather, for reasons set forth above and in the answer, Tsai suggests that claimed bleaching sequence. It follows that we shall also affirm the examiner's § 103(a) rejection of claims 4-6, 9-12, 15 and 16.

Regarding the examiner's separate § 103(a) rejection of claims 23 and 24 as being unpatentable over Tsai in view of Ambady and further in view of alleged admitted prior art set forth at page 2, lines 19-25 of appellant's specification, and Mannbro or Nimmerfroh, we note that appellant argues those rejected claims as a group. Accordingly, we select claim 23 as the representative claim on which we base our decision for this rejection.

Appellant's only argument with respect to the examiner's optional prior art combination including Mannbro (Sweden No. 81020828) is that Mannbro discloses washing between stages and is thus inappropriate. We disagree because Mannbro is not relied upon by the examiner to show the absence of washing between bleaching stages. Rather, Tsai suggest the option of operating the bleaching sequence without intervening washing steps.

In addition to the inter stage washing argument, which we do not find persuasive for the reasons advanced above, appellant furnishes an additional argument concerning the examiner's rejection option employing Nimmerfroh as a reference. In particular, appellant argues that Nimmerfroh employs an E stage with a pH of no lower than 10 unlike appellant's requirement for a pH of 7 as a result of the "E" stage. First, representative claim 23 does not require an E stage pH of 7 as argued. Rather, the recited EN stage of claim 23 is disclosed in appellant's specification (page 3) as representing an alkaline neutralization treatment while specifying that only an approximately neutral pH can result, such as a pH between 6 and 8. Because a pH of 10 as referred to in Nimmerfroh is merely a suggested pH in that reference and there is no lower limit on the alkaline extraction pH of Tsai, we agree with the examiner that the combined

references' disclosures are reasonably suggestive of an alkaline extraction pH within the limits as may be required by representative claim 23.

Consequently, we shall also affirm the examiner's § 103(a) rejection of claims 23 and 24.

#### CONCLUSION

The decision of the examiner to reject claims 1 and 3 under 35 U.S.C. § 102(b) as being anticipated by Tsai is reversed. The decision of the examiner to reject claims 1-3, 7, 8, 13 and 14 under 35 U.S.C. § 103(a) as being unpatentable over Tsai in view of Ambady; to reject claims 4-6, 9-12, 15 and 16 under 35 U.S.C. § 103(a) as being unpatentable over Tsai in view of Ambady and further in view of alleged admitted prior art set forth at page 2, lines 19-25 of appellant's specification; and to reject claims 23 and 24 under 35 U.S.C. § 103(a) as being unpatentable over Tsai in view of Ambady, alleged admitted prior art set forth at page 2, lines 19-25 of appellant's specification, and Mannbro or Nimmerfroh is affirmed.

AFFIRMED

BOARD OF PATENT  
APPEALS  
AND  
INTERFERENCES

PFK/sld

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